

REMARKS/ARGUMENTS

Claims 1-53 are pending and rejected. By this paper, claims 10, 30-32 and 51-53 are cancelled and claims 1, 3, 16, 21, 33 and 40 are amended. Reconsideration and withdrawal of the rejections is respectfully requested.

Objections

Claims 1-15 were objected to because of formalities. Claim 1 has been amended to recite “characteristics.” Reconsideration and withdrawal of the objection is respectfully requested.

35 U.S.C. §102/103

Claims 1-7, 12, 15, 21-29, 31 and 32 were rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over *Shimek* (U.S. Pat. 5,890,485). *Shimek* describes a system for altering a fixed pattern of gas flames in a fireplace having artificial logs and a burner system. The burner system has a gas valve control which is coupled to source of gas or air to be regulated. The control system has a valve which controls the air or gas being supplied to the burner and a control sensor is coupled to the control system for activating the time sequence of the cycle of the control system so as to raise or lower the gas flames being regulated and to disturb the pattern of gas flames to produce the effect of dancing flames. *See Abst.*

Claim 1 has been amended to include the features of dependent claim 10. Specifically, claim 10 has been amended to recite “the controller including a programmable processor and memory, the processor using an algorithm and algorithm inputs stored in the memory.” Claim 21 has been amended to include the features of dependent claim 30. Specifically, claim 21 has been amended to recite “wherein the input device is configured as a control panel having a plurality of user activated actuators.” *Shimek* neither teaches nor suggests all of the features of either of amended claims 1 and 21. Therefore, reconsideration and withdrawal of the rejections is respectfully requested. Claims 3-7, 12, 15 and 22-29 depend from claims 1 and 21 and are allowable for at least the reasons discussed with respect

to claims 1 and 21. Reconsideration and withdrawal of the rejections is respectfully requested.

Claims 1, 8-11, 15, 21, 30 and 40-46 were rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over *Whitaker* et al. (U.S. Pat. 5,450,841). *Whitaker* describes a control unit for remotely operating several different functions of a gas fireplace. The functions include ignition of a fire, control of flame height, blower control, and damper control. An RF or IR transmitter has several different switches corresponding to desired operations to be performed. Each switch or combination of switches sends different coded signals to a receiver in the control unit. The control unit operates a gas valve and an ignitor to start the fire in response to a start signal. The gas valve is further controlled to vary the height of the flame or extinguish the flame in response to corresponding signals. The blower, damper and other functions can be controlled in response to other signals. *See* Abst.

Claim 1 has been amended to include the features of dependent claim 2. Specifically, claim 1 has been amended to recite “adjust a flow of combustible fuel through the variable valve delivered to the burner to generate at least one of a plurality of flame characteristics including a modulated flame.” Claim 21 has been amended to include the features of dependent claim 31. Specifically, claim 21 has been amended to recite “a flame modulator configured to modulate delivery of a combustible fuel to modulate a flame in response to the control signal.” *Whitaker* neither teaches nor suggests all of the features of either of claims 1 and 21 as amended. Therefore, reconsideration and withdrawal of the rejections is respectfully requested. Claims 8-9, 11, and 15 depend from claim 1 and are allowable for at least the reasons discussed with respect to claim 1. Reconsideration and withdrawal of the rejections is respectfully requested.

Claim 40 has been amended to recite “adjusting the flame control signal to adjust the flow of a combustible fuel through a variable valve coupled to a burner; and controlling a flame characteristic including a modulated flame in accordance with the flame control signal.” *Whitaker* neither teaches nor suggests all of the features of claim 40 as amended. Therefore, reconsideration and withdrawal of the rejections is respectfully requested. Claims

41-46 depend from claim 40 and are allowable for at least the reasons discussed with respect to claim 40. Reconsideration and withdrawal of the rejections is respectfully requested.

Claims 13, 14, 16-20, 33 and 37 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Shimek*, as applied to the claims above, in view of *Smith* (U.S. Pat. 6,314,191). *Smith* describes an accessory for gas log fireplaces that includes a crackling sound generating mechanism for simulating the sounds of a log fire and a scent dispensing mechanism for simulating the slight smoke scent of a log fire. *See Abst.*

Claims 13 and 14 depend from amended claim 1. *Smith* fails to teach or suggest “the controller including a programmable processor and memory, the processor using an algorithm and algorithm inputs stored in the memory” as is recited in claim 1. Therefore, neither *Shimek* nor *Smith*, alone or in combination, teaches or suggests all of the features of claims 13 and 14. Reconsideration and withdrawal of the rejections is respectfully requested.

Claim 16 and 33 have been amended to recite “the controller including a programmable processor and memory, the processor using an algorithm and algorithm inputs stored in the memory to generate a control signal to control the variable valve.” Neither *Shimek* nor *Smith*, alone or in combination, teaches or suggests all of the features of claims 16 and 33 as amended. Therefore, reconsideration and withdrawal of the rejections is respectfully requested. Claims 17-20 depend from claim 16 and are allowable for at least the reasons discussed above with respect to claim 16. Reconsideration and withdrawal of the rejections is respectfully requested.

Claims 33, 35-39, 49, 50, 52 and 53 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Whitaker*, as applied above, in view of *Smith*. Claim 33 has been amended to recited “a flame modulator configured to modulate a flame frequency and absolute temperature in response to the flame control signal.” Neither *Whitaker* nor *Smith*, alone or in combination, teaches or suggests all of the features of claim 33 as amended. Therefore, reconsideration and withdrawal of the rejection is respectfully requested. Claims 35-39 depend from claim 33 and are allowable for at least the reasons discussed above with respect to claim 33. Reconsideration and withdrawal of the rejections is respectfully requested.

Claim 49 has been amended to recite “controlling a fuel flow from the gas valve to the burner in response to the control signal to control a flame characteristic including a modulated flame in accordance with the control signal.” Neither *Whitaker* nor *Smith*, alone or in combination, teaches or suggests all of the features of claim 49 as amended. Therefore, reconsideration and withdrawal of the rejection is respectfully requested. Claim 50 depends from claim 49 and is allowable for at least the reason discussed above with respect to claim 49. Reconsideration and withdrawal of the rejections is respectfully requested.

Claim 34 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Whitaker* in view of *Smith* as applied to claim 33, and further in view of *Hess* (U.S. Pat. 6,385,881). *Hess* describes a lighting control device for a gas fireplace, whereby the display lighting of the device produces a “flickering” effect that is synchronized with the changes in light intensity occurring within the fireplace. *See Abst.* Claim 34 depends from claim 33. *Hess* fails to teach or suggest “a flame modulator configured to modulate a flame frequency and absolute temperature in response to the flame control signal” as is recited in amended claim 33. Therefore, neither *Whitaker* nor *Smith* nor *Hess*, alone or in combination, teaches or suggests all of the features of claim 34. Reconsideration and withdrawal of the rejections is respectfully requested.

Claims 47 and 48 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Whitaker* in view of *Bechade et al.* (U.S. Pat. 6,415,008), which describes a digital signal multiplier. *See Abst.* Claims 47 and 48 depend from claim 40 and are allowable for at least the reasons discussed above with respect to claim 40. Reconsideration and withdrawal of the rejections is respectfully requested.

CONCLUSION

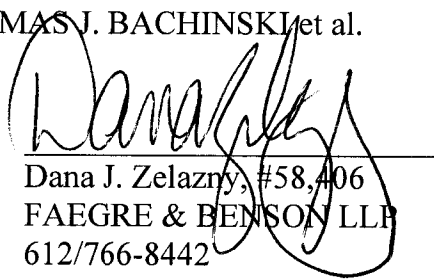
All of the claims remaining in this application should now be seen to be in condition for allowance. The prompt issuance of a notice to that effect is respectfully solicited. If there are any remaining questions, the Examiner is requested to contact the undersigned at the number listed below.

The fee for a One-month Extension of Time is included with this paper. Should any of the fees provided for entry of this paper be incorrect, the Commissioner is authorized to charge the Faegre & Benson Deposit Account No. 06-0029 and in such event, is requested to notify us of the same.

Respectfully Submitted,

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